McClintock, Katie

From: Chow, Alice
Sent: Monday, March 21, 2016 7:46 AM
To: McClintock, Katie
Subject: FW: art glass manufacturing in WV

Katie: WV had no problems sharing this with you. Again, some of the info is pull rate and some usage...so enjoy! Let me know how they fare!

Alice

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From: Chakrabarty, Renu M [mailto:Renu.M.Chakrabarty@wv.gov]
Sent: Tuesday, March 15, 2016 11:51 AM
To: Chow, Alice <chow.alice@epa.gov>
Cc: Keatley, Robert L <Robert.L.Keatley@wv.gov>; Adkins, Jesse D <Jesse.D.Adkins@wv.gov>; Durham, William F <William.F.Durham@wv.gov>
Subject: art glass manufacturing in WV

Alice,

The e-mail and phone systems are down in my part of the building currently. I am sending you this e-mail WITHOUT the documentation noted for each facility from an alternate site now, and will follow-up with those documents once our systems are back online. I can be reached at my personal cell phone (b) (6)

Information on metal HAPs used in the three art glass facilities in WV noted in Janet McCabe's February 25, 2016 memo to the Regional Air Division Directors is summarized below. Documentation in the form of inspection memoranda, permits, correspondence and e-mails is attached.

The information provided below is from the WVDEP's Division of Air Quality files. Please be aware that some of these facilities (and a couple of others that have shutdown) have also worked with WVDEP's Division of Land Restoration/Office of Environmental Remediation.

Blenko Glass Company (011-00017)

This facility is still in operation. Blenko Glass Company operates non-continuous pot furnaces installed pre-1974 to create art glass and is not subject to 40 CFR 63, Subpart SSSSSS. Blenko has 6 non-continuous furnaces, but only 3 have operated in recent years.

Based on the company's 2009 response to an applicability questionnaire for the then, new 40 CFR 63, Subpart SSSSSS, area source NESHAP for glass manufacturing, the company indicated it had the following non-continuous furnaces and capacities:

Furnace ID	Glass Pull Rate	Metal HAPs
Furnace #3 (out of commission)	44 tons glass maximum/year	NA
Furnace #8 In Use	30 tons glass maximum/year	NA
Furnace #9 (out of commission)	44 tons glass maximum/year	NA
Furnace #10 (out of commission)	135 tons glass maximum/year	NA
Furnace #12 In Use	44 tons glass maximum/year	**cadmium, manganese, nickel** used in glass formulation
Furnace #16 In Use	*97 tons glass maximum/year	**manganese** used in glass formulation

*Under normal circumstances Furnace #16 runs less than 50 tons glass/year.

Based on a DAQ inspection conducted on January 22, 2015 it was noted, "Hazardous ingredients used in small quantities are stored in a dedicated room with limited access. Blenko's current formulations include small quantities of **selenium and antimony**, ingredients classified as Hazardous Air Pollutants (HAPs). **By 1990, arsenic and lead, also HAPs were both eliminated** from Blenko's formulations." **Chemicals purchased in 2014 (but not necessarily used that year) included 25 lb cobalt oxide, 75 lb selenium, and 450 lb antimony**. Please note that some amount of metals will be retained in the glass and a small portion would be released to atmosphere.

Documentation:
Memoranda from inspections conducted on July 26, 2000, August 1, 2005, March 13, 2009, and January 22, 2015
The company's July 30, 2009 response to a DAQ applicability questionnaire for 40 CFR 63, Subpart SSSSSS

The Paul Wissmach Glass Company (095-00004)

This facility is still in operation. Paul Wissmach Glass operates non-continuous furnaces to create stained glass sheets and is not subject to 40 CFR 63, Subpart SSSSSS. Paul Wissmach operates up to 14 non-continuous furnaces on a batch basis.

A DAQ inspection conducted on February 27, 2013 indicated there were 14 furnaces operating on a batch basis; only 8 furnaces were operating during the inspection.

A March 10, 2016 e-mail from Mark Feldmeier of The Paul Wissmach Glass Company to James Robertson of DAQ provided metal HAP usage at the facility for 2013, 2014 and 2015. The e-mail also states "several weeks ago we make the decision that we are going to totally eliminate arsenic after our current stock of about 250 lbs has been depleted." The e-mail states "Typically, we are melting glass from 7 to 9 furnaces depending on market conditions and maintenance. Although, we do have capacity for 13 furnaces we have not used this many furnaces at one time for almost 15 years because of market conditions within our industry." DAQ is in the process of determining whether the 14 furnaces noted in the 2013 inspection memo was a typographical error compared to the 13 furnaces the company indicated it has.

Almost all of the metal compounds used for glass enhancement remain in the glass with a small portion of the remaining amount released into our stack system. Please note that the lbs of metals listed below is that of useage and not actual emissions.

Pounds Metal HAP Used (Lbs)		
2015	2014	2013

arsenic	**520**	325	400
nickel	**341**	325	385
cadmium	**2,686**	1,926	2,337
lead	**3,800**	1,000	1,200
manganese	**7,770**	6,500	10,650
chromium	**3,250**	3,250	2,700

The company verbally indicated they did not respond to DAQ's 2009 40 CFR 63, Subpart SSSSSS applicability questionnaire since they determined they were not subject.

Documentation:
Memorandum of inspection conducted on February 27, 2013
A March 10, 2016 e-mail from Mark Feldmeier of The Paul Wissmach Glass Company to James Robertson of DAQ

The Fenton Art Glass Company (107-00015)
This facility still holds its air permit but has not manufactured glass for over four years based on a memorandum discussing a March 25, 2015 DAQ inspection. There are no plans to re-open the facility.

R13-2314 was issued on June 2, 2000 for modification of the glass melting facility by construction of new glass manufacturing Tank #6, Tank #7 and Tank #10. Maximum arsenic emissions from each glass melting furnace were limited to 0.4 Mg per year pursuant to 40 CFR 61, Subpart N, National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plant. Maximum total HAPs from all three tanks were limited to 5 tpy or less.

An April 4, 2000 e-mail from Tom Bobbitt of Fenton Art Glass to Carrie McCumbers of DAQ contained calculations for total HAPs based on metal retention and assuming the remainder was emitted from the stack. **Based on 1998 production, a total of 4.97 ton HAPs was emitted: 1.74 ton Sb, 2.19 ton Lead (Pb), 0.35 ton Arsenic (As), 0.1 ton Cadmium (Cd), 0.01 ton Cobalt (Co), 0 ton Nickel (Ni), 0.29 ton Selenium (Se), 0.27 ton Manganese (Mn) and 0.02 ton Chromium (Cr).**

Fenton made art glass products in day tank glass manufacturing furnaces. These furnaces operated 24 hours per day, but did not pull glass 24 hours/day. These furnaces were loaded with the raw materials (including metal HAPs) in the evenings and kept heated, then the facility worked the glass during the next day to produce glass products (containers/shapes). A February 13, 2009 e-mail from Robert Keatley of DAQ to Susan Fairchild of EPA requested clarification on whether Fenton's glass furnaces met the definition of a continuous furnace for purposes of 40 CFR 63, Subpart SSSSSS. Ms. Fairchild's February 29, 2009 e-mail response noted that EPA revised the definition of glass furnace to address comments received and it was EPA's intent to exclude periodic furnaces (also called day-tank and pot furnaces) operated at art glass facilities from the rule. The company's April 22, 2009 response to a DAQ applicability questionnaire for 40 CFR 63, Subpart SSSSSS indicated that its furnaces were not continuous and therefore not subject to 40 CFR 63, Subpart SSSSSS.

Documentation:
April 4, 2000 e-mail from Tom Bobbitt of Fenton Art Glass to Carrie McCumbers of DAQ containing calculations for total HAPs based on metal retention and assuming the remainder was emitted from the stack based on 1998 production
A copy of R13-2314 issued on June 2, 2000
Feb. 13, 2009 and Feb. 29, 2009 e-mails between Robert Keatley of DAQ and Susan Fairchild of EPA
The company's April 22, 2009 response to a DAQ applicability questionnaire for 40 CFR 63, Subpart SSSSSS
Memorandum of inspection conducted on March 25, 2015

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